

## **WHAT IS CLAIMED IS:**

1. A liquid crystal display comprising:

a first insulating substrate;

a first wiring line assembly formed on the first insulating substrate

5 with a plurality of first wiring lines;

a second wiring line assembly crossing over the first wiring line assembly with a plurality of second wiring lines while defining pixel regions, the second wiring line assembly being insulated from the first wiring line assembly;

10 a pixel electrode formed at each pixel region with a first opening pattern;

a thin film transistor connected to the first wiring line assembly, the second wiring line assembly, and the pixel electrode;

a second insulating substrate facing the first insulating substrate;

15 color filters of red, green and blue formed on the second insulating substrate;

a common electrode formed on the second insulating substrate with the color filters having a second opening pattern; and

20 a liquid crystal layer sandwiched between the first and the second insulating substrates with liquid crystal molecules, the liquid crystal molecules of the liquid crystal layer being vertically aligned with respect to the first and the second substrates when no electric field is applied between the pixel electrode and the common electrode;

wherein a B cell gap is differentiated from an R cell gap or a G

cell gap, the R cell gap indicates the thickness of the liquid crystal layer at the region of the red color filter, the G cell gap indicates the thickness of the liquid crystal layer at the region of the green color filter, and the B cell gap indicates the thickness of the liquid crystal layer at the region of the blue color filter.

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2. The liquid crystal display of claim 1 wherein the B cell gap is established to be smaller than the R cell gap or the G cell gap by  $0.2 \pm 0.15 \mu\text{m}$ .

3. The liquid crystal display of claim 1 wherein the B cell gap, the R cell gap and the G cell gap are differentiated from each other by:  $R \text{ cell gap} - G \text{ cell gap} < G \text{ cell gap} - B \text{ cell gap}$ .

4. The liquid crystal display of claim 1 wherein the first and the second opening patterns partition the pixel region into a plurality of micro-domains.

5. The liquid crystal display of claim 4 wherein the micro-domains are classified into left and right domains, and upper and lower domains, the volume occupied by the upper and lower domains being larger than the volume occupied by the left and right domains.

6. The liquid crystal display of claim 4 wherein the distance between two neighboring second wiring lines is repeatedly varied per a

predetermined length, and the pixel electrode has lateral sides positioned close to the second wiring lines with the same outline such that the pixel electrode bears a narrow portion and a wide portion.

5                    7.        A color filter substrate for a liquid crystal display, the color filter substrate comprising:

an insulating substrate;

a black matrix formed on the insulating substrate, the black matrix having portions for defining pixel regions;

10                    color filters of red, green and blue formed at the pixel regions;

an overcoat layer covering the color filters; and

a transparent electrode formed on the overcoat layer with an opening pattern;

15                    wherein the blue color filter has a thickness larger than the red color filter or the green color filter.

8.        The color filter substrate of claim 7 wherein the thickness of the blue color

filter is larger than the red color filter or the green color filter by  $0.2 \pm 0.15 \mu\text{m}$ .

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9.        A process of manufacturing a liquid crystal display, comprising the steps of:

forming a first insulating substrate;

forming a first wiring line assembly with a plurality of first wiring lines on the first insulating substrate;

forming a second wiring line assembly with a plurality of second wiring lines

5 crossing over the first wiring line assembly while defining pixel regions, the second wiring line assembly being insulated from the first wiring line assembly;

forming a pixel electrode at each pixel region with a first opening pattern;

10 forming a second insulating substrate facing the first insulating substrate;

forming color filters of red, green and blue on the second insulating substrate;

forming a common electrode on the second insulating substrate with the color

15 filters having a second opening pattern;

forming a liquid crystal layer sandwiched between the first and the second

insulating substrates with liquid crystal molecules, the liquid crystal molecules of the liquid crystal layer being vertically aligned with respect to the first and the  
20 second substrates when no electric field is applied between the pixel electrode and the common electrode; and

differentiating a B cell gap from an R cell gap or a G cell gap, the R cell gap indicates the thickness of the liquid crystal layer at the region of the

red color filter, the G cell gap indicates the thickness of the liquid crystal layer at the region of the green color filter, and the B cell gap indicates the thickness of the liquid crystal layer at the region of the blue color filter.

5                    10.        The process of manufacturing according to claim 9, wherein at least one of the first and second opening patterns partitions the pixel region into a plurality of micro-domains.

10                    11.        The process of manufacturing according to claim 9, wherein the B cell gap is formed to be smaller than the R cell gap or the G cell gap by  $0.2 \pm 0.15 \mu\text{m}.$